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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,531	09/11/2001	Yvan Strauven	U.MINIERE-03	4239
42253	7590	06/30/2006	EXAMINER	
MISHRILAL JAIN 11620 MASTERS RUN ELLCOTT CITY, MD 21042			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/936,531

Applicant(s)

STRAUVEN ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892).
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 5, 2005 has been entered.

This Office action addresses claims 1-17. The declaration under 37 CFR 1.132 has been considered but is not persuasive. As such, the claims remain rejected for substantially the reasons of record. This action is non-final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 94/19502 in view of JP 1-52379.

Regarding claim 5, WO '502 is directed to an alkaline battery comprising an anode, cathode, and electrolyte (see claim 23 of the reference). Regarding claim 1, the anode comprises a zinc alloy having a composition which anticipates each of the claimed compositions (a), (b), and (c). For example, the alloy disclosed at page 5, line 30, which contains 70 ppm (0.007 wt%) Al and 250 ppm (0.025 wt%) Bi, anticipates alloy (c) of instant claim 1. The alloy disclosed at

page 6, line 12 (0.007 wt% Al, 0.025 wt% In) anticipates alloy (a) of instant claim 1. The alloy disclosed at page 6, line 21 (0.003 wt% Al, 0.025 wt% In, 0.025 wt% Bi) anticipates alloy (b) of instant claims 1 and 2. Regarding claim 6, the powder comprises metal cemented out of the electrolyte (see claim 24 of the reference). Regarding claim 1, the powder can be made by a centrifugal atomization process (see page 3, line 30).

WO '502 does not expressly teach that the centrifugal atomization process is carried out in an atmosphere with a relatively low (i.e., <4vol%) oxygen content, as recited in claims 1, 3, 4, 7, 8, 9, and 10.

JP '379 is directed to a zinc alloy powder for an alkaline battery (see abstract). The powder is manufactured by atomizing the molten zinc alloy in a low oxygen concentration (<4vol%) atmosphere (see abstract).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the disclosure of JP '379 would motivate the artisan to conduct the centrifugal atomization of WO '502 in an atmosphere containing less than 4 vol% oxygen. In the abstract, JP '379 teaches that the purpose of this atmosphere is "to retard hydrogen gas evolution in spite of a low mercury content." Accordingly, the artisan would be motivated to conduct the centrifugal atomization of WO '502 in an atmosphere containing less than 4 vol% oxygen.

***Response to Arguments/Declaration***

3. Applicant's arguments and declaration filed December 5, 2005 have been fully considered but they are not persuasive. Regarding the declaration under 37 CFR 1.132, results have been shown for two alloys taken from WO '502 and two alloys taken from JP '379, each such alloy having been made by a "classical gas atomization process" and a centrifugal atomization process. However, the declaration is deficient in several respects. First, it is noted that the use of the classical gas atomization process in the declaration is not germane to the outstanding rejection. Both JP '379 and WO '502 are concerned with centrifugal atomization processes, as is the claimed invention. Thus, any alloys made by processes other than centrifugal atomization are not germane to the outstanding rejection. As such, the basis for comparison of the centrifugally atomized alloys in the declaration is unclear. Further, both JP '379 (the closest prior art) and the claimed invention are concerned with centrifugal atomization at low oxygen content, so all such alloys to be compared should be made by this process. Alloys made by a classical gas atomization process do not represent the closest prior art to the claimed invention.

Regarding the compositions of the alloys, it is noted that there is significant overlap between compositions (1)-(3) of page 2 of WO '502 and the claimed compositions. It is submitted that the artisan would be motivated to make any of the alloys of WO '502 using the low-oxygen centrifugal atomization process of JP '379. As such, given the significant elemental overlap in the prior art compositions vs. the claimed compositions, it is submitted that comparisons should be made between alloys falling within the claimed compositional limits vs. alloys falling outside the claimed compositional limits but within the limits disclosed by WO

'502. In other words, there has not been a sufficient showing that the claimed alloy compositions are critical. For example, WO '502 discloses Al contents of 1-95 ppm (0.0001-0.0095 wt%) for each of alloys (1)-(3). However, the alloys of claim 1 have the following Al content: alloy (a), 50-2000 ppm Al; alloy (b), 10-5000 ppm; alloy (c), 50-2000 ppm (the alloys recited in instant claims 2 and 8 having ranges that are slightly narrower than the preceding ranges). It is noted that the aluminum content, for the broadly claimed ranges, overlaps with the 1-95 ppm range of WO '502 in the upper portions of the WO '502 range. To distinguish over the applied references, comparisons should be made by varying the compositions of the alloys so that it can be discerned that the claimed alloys are distinguishable from the alloys of WO '502 *when both are made by the claimed low-oxygen centrifugal atomization process* (as suggested by JP '379). Therefore, it is submitted that in order to obviate the outstanding grounds of rejection, more data needs to be presented with regard to the compositions of the alloys. As noted above, all alloys to be compared should be made by a low-oxygen centrifugal atomization process as suggested by JP '379.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1745  
June 23, 2006